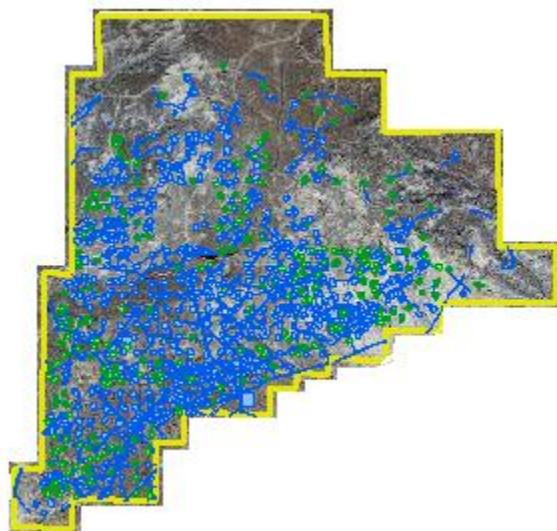


# **Jonah Infill Data Management System (JIDMS) Operator Manual**



## **Welcome to the Jonah Infill Data Management System**

This application has been developed to help both land managers and gas company operators collect and share standardized reclamation assessment and monitoring data.

### **For help with JIDMS:**

E-mail the JIO Help Desk at [dbays@blm.gov](mailto:dbays@blm.gov)

Or telephone the JIO (Jonah Interagency Office) Help Line at 307-367-5361 and leave a message.

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# How to Log On to the System

## Locate the Jonah Infill Data Management System Site:

Go to <https://data.fort.usgs.gov/jio> Log on with your username and password. If you have forgotten this, please email [gs\\_help\\_jdt@usgs.gov](mailto:gs_help_jdt@usgs.gov).

## Register as a New User:

Email [gs\\_help\\_jdt@usgs.gov](mailto:gs_help_jdt@usgs.gov) and request access to JIO. Leave your first and last name in the message as well as your company name, email address, physical address and phone number. It will take up to ONE DAY to receive your user login information.

## Change Your Password:

Go to <https://my.usgs.gov/home/myAccount> and select the Change Password option in the My User Account Properties table.

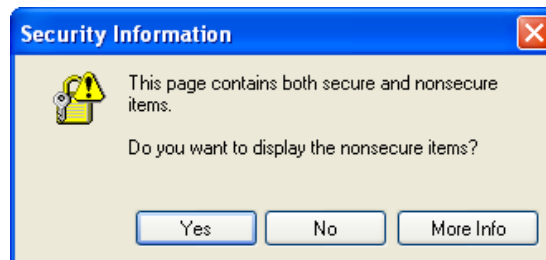
## Forgot Your Password:

For help resetting a password or reporting problems with myUSGS, please email [gs\\_help\\_jdt@usgs.gov](mailto:gs_help_jdt@usgs.gov).

**NOTE:** USGS utilizes my.usgs.gov for centralized user management for all applications hosted on the USGS site. Therefore, usernames and passwords are managed by the USGS User Profile store at <https://my.usgs.gov>. As a result, users are forwarded to this system to enter their authentication credentials. The MyUSGS site has a team who helps with password resets and access questions. The JIO Application lets MyUSGS determine if a user is authorized and authenticated and does not store any user profile information.

## Disable the Security Information Pop-Up:

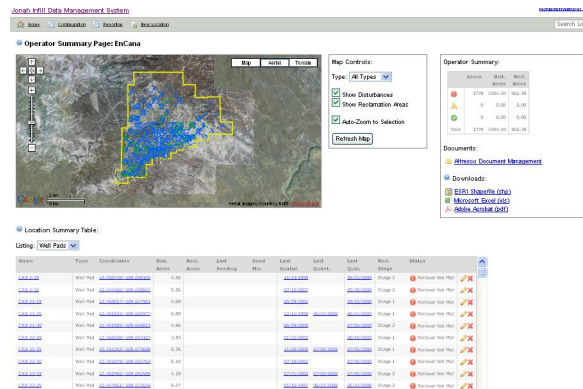
If you receive the following alert anywhere during the application (only seen in Internet Explorer), select Yes.



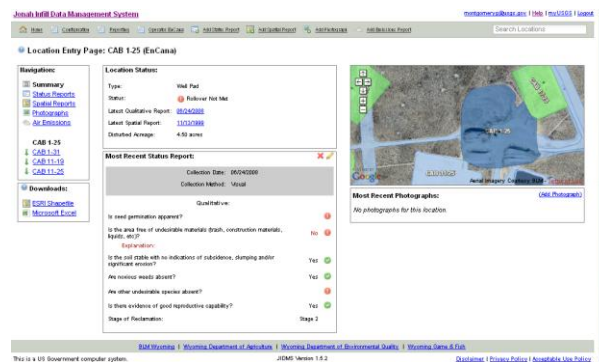
# Overview of the Application

**SUMMARY PAGES:** This application utilizes two summary pages or “dashboards” to direct the user to the activity they may want to perform:

The **Operator Summary Page** (see overview on page 6) is the page used to manage information for each individual operator. It is the opening page a user sees and the starting point for all activities (such as adding/updating a location or downloading summary information) in the application. It is also the central location for summary information (Location Summary Table) on the operator and all of their locations.



The **Location Entry Page** (see overview on page 12) is the page used to manage information for each individual location. From this page a user can add, edit, delete or view all of the information tied to that one location.



**NAVIGATION:** Links are utilized throughout the application to take users back and forth between locations, reports and summary tables. Often times information can be accessed or entered from multiple points in the application.

## **Overview of the Application continued.....**

**ACTIVITIES:** Once logged on, users may choose to work on one of four types of activities. (All of these activities can be initiated from the **Operator Summary Page** which is discussed in the next section):

### **Viewing Information Specific to an Operator or Specific to a Location (Section 1):**

- Viewing an aerial image of all the locations for one operator on a Google map.
- Viewing information on an individual location.
- Viewing summary information on one operator.
- Viewing summary information on all locations specific to one operator.

### **Adding a New Location from the Operator Summary Page (Section 2):**

- Adding a New Location.

### **Adding, Editing, Viewing or Deleting Information on Existing Locations from the Location Summary Page (Section 3):**

- Adding, editing, viewing or deleting Status Reports.
- Adding, editing, viewing or deleting Spatial Reports.
- Adding, editing, viewing or deleting Photographs.
- Accessing information on a Reference Point.

### **Obtaining Custom Reports, Downloading Files for Use Outside of the Application or Uploading Batch Files or Support Data for Use within the Application (Section 4)**

After evaluating the monitoring data that has been entered into JIDMS, each location will be categorized into one of four stages to determine reclamation status. The end result is to have a location's stage of reclamation reach Stage 4 where final reclamation criteria have been met.

This tutorial goes into greater detail about how JIDMS works and is organized based upon the four types of activities a user may choose from.

**NOTE:** Please See the Reclamation Criteria document in the Appendix for help understanding rollover status.

**NOTE:** Please See the Quantitative Definitions and Qualitative Definitions documents in the Appendix for help understanding the rules and completing the status reports.

# Overview of the Operator Summary Page

Once logged on, a user will be taken to the **Operator Summary Page** which is the starting place for one of four types of activities a user may want to do. Below is a summary of those types of activities.

## 1. View information specific to an operator (for more detail – go to section 1):

- A. Operator Name
- B. Operator Locations
- C. Operator Summary Information
- D. Summary Table of all Locations for this Operator

## 2. Add a new location from the Operator Summary Page (for more detail – go to section 2):

- E. Add a new location.

## 3. Add, edit, view or delete information on an existing location from the Location Entry Page (for more detail – go to section 3):

- F. Add, edit, view or delete information specific to a location. (By clicking on a location name, the user will be directed to the Location Entry Page for that location.)

## 4. Obtain reports or download files for use outside of the application:

- G. Go to the JIO Reports page.
- H. Download the summary table as an Excel file or an Adobe PDF file OR download location spatial data as an ESRI Shape file.

# Section 1: View Information Specific to an Operator or Specific to a Location

Once logged in, a user will be taken to the **Operator Summary Page** and may choose to:

## 1. View an aerial image of all the locations for one operator on a Google Map.

Aerial Image of Jonah Field. Blue Images indicate a disturbed area. Green Images indicate a reclaimed area.

Modify Map view via Google Map options.

Modify map view via Map Controls. Choose to view particular types of images (well pads, pipelines, or roads). OR choose to show disturbed or reclaimed locations only.

**Operator Summary Page: EnCana**

Map Control:

- Type: All Types
- ☒ Show Disturbances
- ☒ Show Reclamation Areas
- ☒ Auto-Zoom to Selection
- Refresh Map

**Operator Summary:**

Locid	Dist. Acres	Recl. Acres
1779	4754.42	563.39
0	0.00	0.00
0	0.00	0.00
Total	1779	4754.42

**Documents:**

- Atresco Document Management

**Downloads:**

- ESRI Shapefile (.shp)
- Microsoft Excel (.xls)
- Adobe Acrobat (.pdf)

**Location Summary Table:**

Listing: Well Pads

Name	Type	Coordinates	Dist. Acres	Recl. Acres	Last Banding	Seed Mix	Last Reclaim	Last Quant.	Last Quik.	Recl. Stage	Status
CH-1-10	Well Pad	49.000000 -109.000000	4.50				04/24/2009			Stage 2	Reclaim Test Map
CH-1-10	Well Pad	49.000000 -109.000000	5.50				04/24/2009			Stage 2	Reclaim Test Map
CH-1-10	Well Pad	49.000000 -109.000000	4.00				04/24/2009			Stage 1	Reclaim Test Map
CH-1-10	Well Pad	49.000000 -109.000000	4.00				04/24/2009			Stage 1	Reclaim Test Map
CH-1-10	Well Pad	49.000000 -109.000000	4.00				04/24/2009			Stage 2	Reclaim Test Map
CH-1-10	Well Pad	49.000000 -109.000000	4.00				04/24/2009			Stage 1	Reclaim Test Map
CH-1-10	Well Pad	49.000000 -109.000000	4.00				04/24/2009			Stage 1	Reclaim Test Map
CH-1-10	Well Pad	49.000000 -109.000000	4.00				04/24/2009			Stage 1	Reclaim Test Map
CH-1-10	Well Pad	49.000000 -109.000000	4.00				04/24/2009			Stage 2	Reclaim Test Map
CH-1-10	Well Pad	49.000000 -109.000000	4.00				04/24/2009			Stage 2	Reclaim Test Map

The information in the map can be modified to show information specific to the user's needs:

via **Google Map** options:

- Click on the '+' or '-' box on the map to zoom in or out to see a specific location or a group of specific locations.
- Click on either 'Map' 'Aerial' or 'Terrain' to change the map view.

via **Map Controls** to:

- Show a specific type of image – select either 'All Types', 'Roads', 'Well Pads', 'Pipelines' or 'Others' from the pick list in the **Type** box and the click **Refresh Map** to show only the data points for the selected type of location.
- Show disturbances only - select the **Show Disturbances** box and then click **Refresh Map** to show only data points for disturbed locations.
- Show reclamation areas only – select the **Show Reclamation Areas** box and then click **Refresh Map** to show only data points for reclaimed locations.
- Select Auto-Zoom to have the map automatically zoom to the selected option.

**NOTE:** Locations with surface disturbances show up on the map in **Blue**. Locations which have been reclaimed show up on the map in **Green**. The Jonah Boundary is in **Yellow**.

## 2. View information on an individual location.

To view more information on a location:

1. Click on a specific location on the map (a white dialogue box will appear).
2. Click on the location name in the white dialogue box.
3. Click on the location name in the Location Summary table.

**Operator Summary Page: EnCana**

Distance: [SHR 44-24](#)

Operator: EnCana  
 Type: Well Pad  
 Disturbance Acres: 1.89  
 Reclamation Acres: 1.89  
 Latest Spatial Report: 12/30/1899  
 Latest Qualitative: 07/05/2008  
 Status: Rollover Not Met

[Zoom To Location](#)

**Map Controls:**  
 Type: Well Pads  
☒ Show Disturbances  
☒ Show Reclamation Areas  
☒ Auto-Zoom to Selection  
[Refresh Map](#)

**Operator Summary:**

	Locns.	Dist. Acres	Recl. Acres
1779	1779	4354.40	561.39
0	0	0.00	0.00
0	0	0.00	0.00
Total	1779	4354.40	561.39

**Documents:**  
[Alfresco Document Management](#)

**Downloads:**  
[ESRI Shapefile \(.shp\)](#)  
[Microsoft Excel \(.xls\)](#)  
[Adobe Acrobat \(.pdf\)](#)

**Location Summary Table:**

Listing: Well Pads

Name	Type	Coordinates	Dist. Acres	Recl. Acres	Last Seeding	Seed Mix	Last Spatial	Last Quant.	Last Qual.	Recl. Stage	Status
<a href="#">CAB 1-25</a>	Well Pad	42.459748/-109.658166	4.50				11/13/1992		06/24/2008	Stage 2	Rollover Not Met
<a href="#">CAB 1-31</a>	Well Pad	42.444466/-109.638843	5.56				07/15/2007		05/29/2008	Stage 2	Rollover Not Met
<a href="#">CAB 11-19</a>	Well Pad	42.466017/-109.647761	4.69				06/29/2004		08/15/2008	Stage 1	Rollover Not Met

There are 3 ways to view information on an individual location:

1. Click on a specific location (a specific blue or green image) on the map to obtain summary information on that location site (once clicked a white dialogue box appears with the summary information).

**NOTE:** The White Pop Up Box available for each location has 2 Tabs. The first tab – **Disturbance** – displays the operator name, type of location, disturbance acres, date of the latest spatial report and status. It is also possible to Zoom to Location from this tab. The second tab – **Lease** – displays information pertaining to the lease for that location.

2. Click on the location name in the white dialogue box to be taken to the **Location Entry Page** for that location.
3. Click on a location name in the **Location Summary Table** to be taken to the **Location Entry Page** for that location.



### 3. View summary information on one operator.

Operator Summary:			
	Locns.	Dist. Acres	Recl Acres
!	790	3048.67	561.39
⚠	0	0.00	0.00
✓	1	2.27	0.00
Total	791	3050.94	561.39

Review the information in the **Operator Summary** box. This information is automatically generated by the application. (Clicking inside the box does not have any effect.) The information in the box shows total number of locations, disturbed acres and reclaimed acres for the operator:

- ! indicates conditions where a rollover has not been met
- ⚠ indicates rollover conditions have been met—but the location has not been released
- ✓ indicates the location has been released

**NOTE:** Please See the Reclamation Criteria document in the Appendix for help understanding rollover status.

#### 4. View summary information on all locations specific to one operator.

The **Location Summary Table** located at the bottom of the page lists each location and the associated information available for that location. It also shows the reclamation stage and status for the location.

The screenshot displays the 'Operator Summary Page: EnCana' interface. At the top, there's a navigation bar with 'Home', 'Dashboard', 'Analysis', and 'Reclamation'. Below this is a map of a land area with various colored overlays. To the right of the map are 'Map Controls' including a 'Type' dropdown set to 'All Types', checkboxes for 'Show Disturbances', 'Show Reclamation Areas', and 'Auto-Zoom to Selection', and a 'Refresh Map' button. Further right is an 'Operator Summary' table with columns for 'Location', 'Dist.', 'Recl. Area', and 'Status'. Below the map and summary is the 'Location Summary Table' with columns for 'Location', 'Dist.', 'Recl. Area', 'Status', 'Reclamation Stage', and 'Reclamation Status'. A 'Linking' dropdown is set to 'Well Pads'. To the right of the table is a 'Downloads' section with links for 'Microsoft Excel (xls)' and 'Adobe Acrobat (pdf)'. Annotations include: an arrow pointing to the 'Linking' dropdown with the text 'Sort the table by specific listing (Well Pads, Roads, etc.)'; an arrow pointing to the 'Downloads' section with the text 'Download the Location Summary Table as an Excel file or a PDF file to work with outside of the application.'; and an arrow pointing to the edit/delete icons in the 'Status' column with the text 'It is possible to edit a location (including its name) by clicking on the pencil or delete the location by clicking on the red x.'

Sort the table by specific listing (Well Pads, Roads, etc.).

Download the Location Summary Table as an Excel file or a PDF file to work with outside of the application.

It is possible to edit a location (including its name) by clicking on the pencil or delete the location by clicking on the red x.

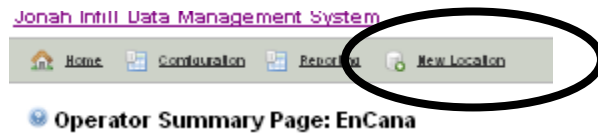
Location Summary Table

The location name is in the first column of the table (i.e. CAB 1-25). This name is also used on the Google map (when using a close enough view) to identify the location. The location name is used throughout the entire application to identify a specific location.

**NOTE:** To work with this summary table outside of the application or to print the table – choose the Microsoft Excel (xls) option or the Adobe Acrobat (pdf) option in the Downloads box.

## Section 2: Add a New Location

To add a new location, select **New Location** from the **Operator Summary Page**.



Next, enter the name for the location and indicate if a Mat Pad is used by checking the box.

Jonah Infill Data Management System

Home Configuration Reporting Operator EnCana

### Create Location for EnCana

**Name:**

**Mat Pad:** ☒

**Location Type:**

Select **Create** or **Cancel**. If **Create** is selected, a blank **Location Entry Page** is created for a location with that name.



The links take the user to the same Add Spatial Report page.  
(This is the same for Photographs, and Status Reports.)

**NOTE:** Adding, editing or viewing information on this new location is the same as for a location that already exists, except existing information does not exist. To learn how to add, edit or view information for this location using the navigation bar (which works the same as the links on the page) continue on to the next section.



## 2. Add, edit, view or delete Status Reports

To add a status report select **Add Status Report** in the navigation bar, this will open up the entry port for the status report for a specific date. This report will be known by its collection date whenever referenced or listed in a summary. Enter the Quantitative and Qualitative information as it applies to the report.

The collection date and collection method **MUST** be entered for each status report entered.

*Optional* Seeding date and seed mix fields are available. When choosing this option, both fields must be completed.

Indication of final rollover status.

Select Create or Cancel to Save or Delete the entered information.

This box explains the rule that has not been met. It can be seen by mousing over the red exclamation point indicating rollover status not met.

Please See the Quantitative Definitions and Qualitative Definitions documents in the appendix for help understanding the rules and completing the status reports.

There are two different types of reports available in the status report section - a **Quantitative** report and a **Qualitative** report. All of the lines must be completed for either the **Qualitative** report or the **Quantitative** report or both before a report can be created.

**NOTE:** Please See the Quantitative Definitions and Qualitative Definitions documents in the Appendix for help understanding the rules and completing the status reports.

**NOTE:** The Qualitative report is designed so that a 'Yes' indicates conditions where rollover criteria has been met and a 'No' indicates conditions where rollover criteria has **not** been met.

To help the user know immediately if the information that is being added into the status report meet the rollover criteria, an indicator of rollover status is next to each line of the survey. The symbols will change as information is entered. The symbols that could show are as follows:

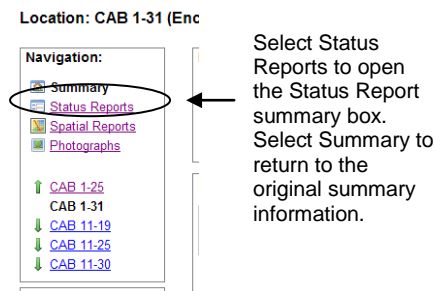
- ❗ indicates conditions where a rollover criteria has not been met
- ⚠ indicates rollover conditions have been met—but the location has not been released
- ✅ indicates conditions where a rollover criteria has been met

Important points to remember when entering status report information:

- Use the MM/DD/YYYY format or the date will not be accepted.
- A collection method must be selected from the list in the Collection Method field.
- If a line does not meet rollover criteria – a box may be accessed which explains the rule that has not been met by clicking on the red exclamation point.
- The options for answering the questions in the **Qualitative** report are 'Yes' or 'No'. If 'No' is selected, a box appears asking for an explanation for the 'No' response.

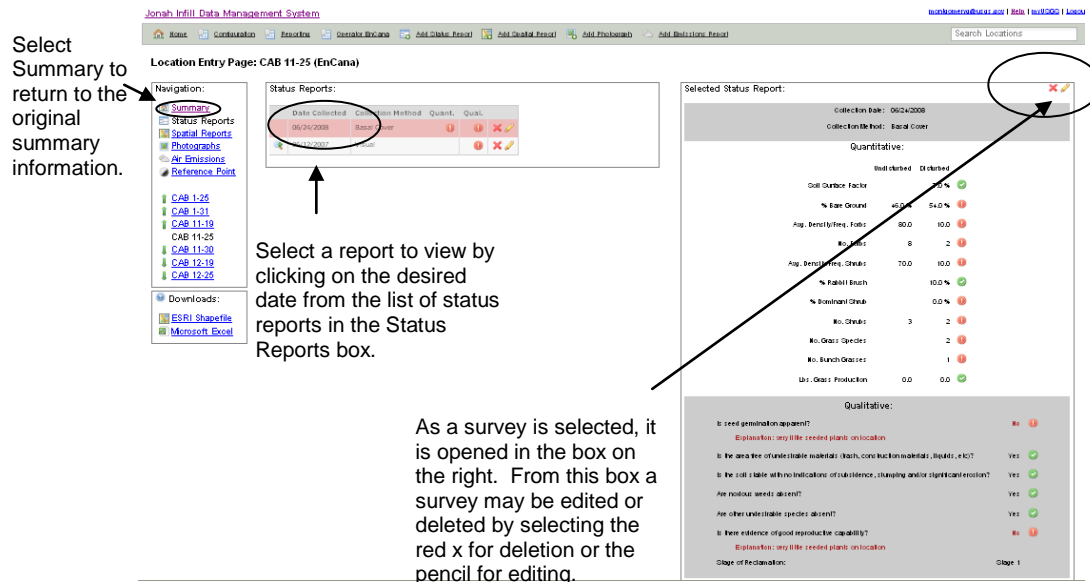
Once all information has been added, a final indication of rollover status is shown at the top of the report. Select **Create** to save the information in the status report or **Cancel** to return to the **Location Entry Page** without making any changes.

All of the Status Reports for a particular location can be accessed from the **Navigation** box on the **Location Entry Page**. To do this the user selects **Status Reports** to open the **Status Reports** summary box and show the most recent status report.



Select Status Reports to open the Status Report summary box. Select Summary to return to the original summary information.

The **Status Reports** summary box lists all of the status reports completed for this location. Click on an existing report date to have the report displayed in the **Selected Status Reports** box on the right. From this box, a report may be edited or deleted by selecting the red x for deletion or the pencil for editing.



Select **Summary** in the Navigation box to return the **Location Entry Page** to its original view.

Please See the Quantitative Definitions and Qualitative Definitions documents in the appendix for help understanding the rules and completing the status reports.

### 3. Add, edit, view or delete Spatial Reports

To add a spatial report select **Add Spatial Report** in the navigation bar, this will open up the upload page for uploading a Zip File with a shapefile. This report will be known by its collection date whenever referenced or listed in a table.

Browse to the desired file and select Submit.

**NOTE:** Reclamation polygons MUST be uploaded with the corresponding disturbance polygon or the system will reject the spatial upload.

#### Jonah Infill Data Management System

Home Reporting Operator Encana Location CAB 11-19

### Add New Spatial Report for Location CAB 11-19

Upload a ZIP file containing a valid shapefile (SHP) and its associated support files (PRJ, SHX, DBF, etc).

Upload ZIP File w/ Shapefile:

Once uploaded (see the note regarding uploading shapefiles at the end of this section) a list of features within that shapefile are displayed. To select the desired shapefile polygon to import from the list - browse through the list of files and view the feature associated with that line by selecting the radio button in the first column if the feature is a surface disturbance (will show up as a blue polygon) and in the second column if it is a reclamation area (will show up as a green polygon). Pick the one disturbance and the one reclamation (if applicable) feature that should be associated with this location and then select Save. The shapefile polygon will be uploaded and available for view on the **Location Entry Page**. The shapefile with the most recent collection date will be viewable on the map on the **Operator Summary Page** as well.

#### Add New Spatial Report for Location Test - 123

Select the shapefile polygon that you wish to import from the list, then click Save.

Collection Date:

Map Aerial Terrain

Dist	Recl	OBJECTID	WSN	UWI	Location	PatName	Shape_Leng	Shape_Area
<input type="radio"/>	<input type="radio"/>	1	41325.0	4.903525143E13	SHB 29-14	SHB 29-14	1365.99072638	107553.2
<input type="radio"/>	<input type="radio"/>	2	43965.0	4.903525097E13	SHB 35-14	SHB 35-14	1366.13529215	107552.2
<input type="radio"/>	<input type="radio"/>	3	44495.0	4.903525121E13	SHB 35-15	SHB 35-15	1365.9608704	107552.2
<input type="radio"/>	<input type="radio"/>	4	43935.0	4.903524765E13	SHB 53-15	SHB 53-15	1366.03657522	107554.2
<input type="radio"/>	<input type="radio"/>	5	43687.0	0.0	SHB 43-27X	SHB 43-27X	1393.44963438	109973.2
<input type="radio"/>	<input type="radio"/>	6	44517.0	4.903525271E13	SHB 58-27	SHB 58-27	1393.48057532	109984.2
<input type="radio"/>	<input type="radio"/>	7	41386.0	4.903525338E13	SHB 55-41-27	SHB 41-27	1393.48419065	109991.2
<input type="radio"/>	<input type="radio"/>	8	44473.0	4.903525346E13	CAB 96-25	CAB 96-25	1259.40055451	98906.7
<input type="radio"/>	<input type="radio"/>	9	41368.0	4.903525157E13	SHB 19-26	SHB 19-26	1393.55172808	109991.2
<input type="radio"/>	<input type="radio"/>	10	41378.0	4.903525138E13	SHB 57-26	SHB 57-26	1259.50178946	98922.2
<input type="radio"/>	<input type="radio"/>	11	44505.0	4.903525136E13	SHB 22-26	SHB 22-26	1259.64588603	98944.2
<input type="radio"/>	<input type="radio"/>	12						

Save Cancel

Enter collection date here. This will become the name of this report. Use the MM/DD/YYYY format or the date will not be accepted.

Select a radio button to view the feature in the window. Disturbed areas will show up as a blue polygon and reclaimed areas will show up as a green polygon.

The shapefile will not be uploaded and a warning will show when the shapefile intersects with another existing location.

⚠ Your new disturbance area upload intersects the disturbance area of the location "SHB 29-14" from Encana. This is not permitted.

**NOTE:** The uploaded file must be a ZIP file containing an ESRI shapefile that consists of, at minimum, SHP, DBF, SHX, and PRJ files. The shapefile may contain many features; once your file is uploaded, you will be able to select which features represent the surface disturbance and reclamation areas for that location.

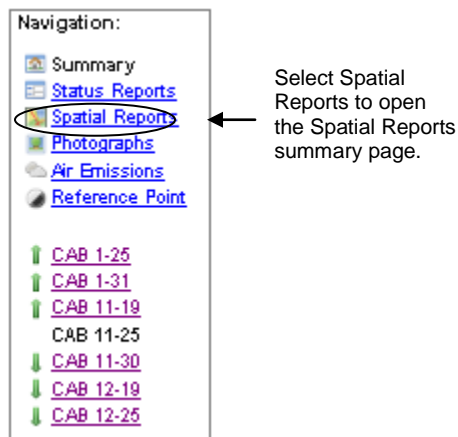
Spatial data must be defined as polygon or multi-polygon features. No other types are accepted. Surface disturbance features must represent the entire surface disturbance for the location, including any part that has been reclaimed. The reclamation polygon must be entirely contained by the surface disturbance polygon. All spatial data must be represented by polygons or multi-polygons that conform to the OpenGIS Simple Features Specification.

The system will attempt to automatically transform the spatial data found in your shapefile to the system's internal projection, unprojected WGS-84. This process may have varying degrees of accuracy and you should use the preview map to verify that the system has completed the transformation properly. To ensure maximum accuracy, we recommend that you use NAD-27, NAD-83, or WGS-84 for your projection's datum. If you desire complete control over the transformation, convert your shapefile to unprojected WGS-84 and the automated conversion process will not occur.

**NOTE:** Utilize Alfresco Document Management to upload batch files of summary data - see section 4.4 subheading **Alfresco Document Management** on page 29 for instructions



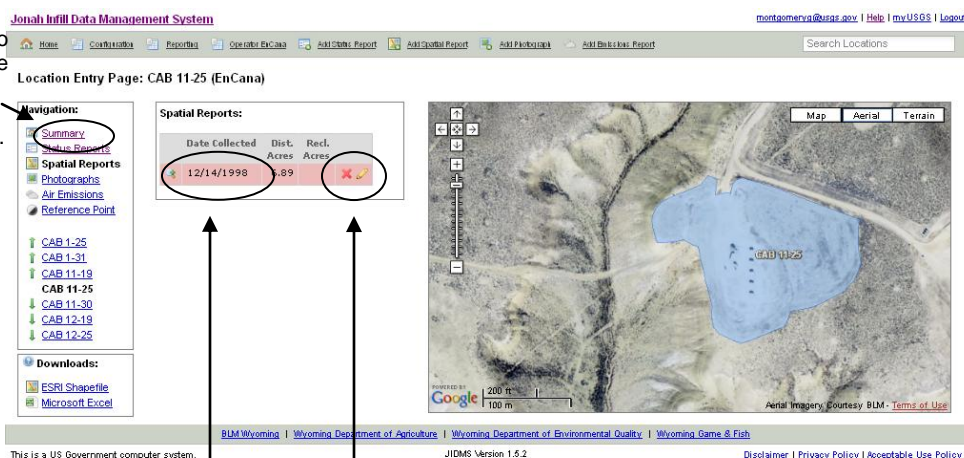
All of the Spatial Reports for a particular location can be accessed from the **Navigation** box on the **Location Entry Page**. To do this the user selects **Spatial Reports** to open the **Spatial Reports** summary box and show the most recent Spatial Report.



Select Spatial Reports to open the Spatial Reports summary page.

The **Spatial Reports** summary box lists all of the spatial reports uploaded for this location. Click on an existing report date to have the report displayed in the box on the right. The selected report is highlighted in a red bar in the table and displayed in the window to the right. A report may be edited or deleted by selecting the red x for deletion or the pencil for editing next to the report in the table.

Select Summary to return to the original summary information.



Select a report to view by clicking on the desired date. The selected report is highlighted in a red bar in the table and displayed in the window to the right. A report may be edited or deleted by selecting the red x for deletion or the pencil for editing.

Select **Summary** in the Navigation box to return the **Location Entry Page** to its original view.

#### 4. Add, edit, view or delete Photographs

To add a photograph, select **Add Photograph** in the navigation bar, this will open up the upload page for uploading a photograph either as a JPG, GIF or PNG image. This photograph report will be known by its collection date whenever referenced or listed in a table.

Browse to the desired image and select **Save**.

The collection date and direction MUST be entered for each photograph added.

**Jonah Infill Data Management System** [montgomer](#)

Home Reporting Operator Encana Location CAB 11-30 Sea

### Add Photograph for Location CAB 11-30

Collection Date:   
(MM/DD/YYYY)

Location: CAB 11-30

Direction:  ▼

Comment (optional):

JPG, GIF, or PNG Image:

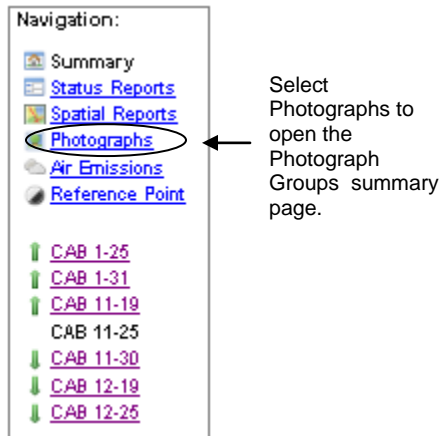
Select Save or Cancel to Save or Delete the entered information.

Important points to remember when entering status report information:

- Use the MM/DD/YYYY format or the date will not be accepted.
- A direction must be selected from the list in the **Direction** field.

**NOTE:** Utilize Alfresco Document Management to upload batch files of summary data - see section 4.4 subheading **Alfresco Document Management** on page 29 for instructions

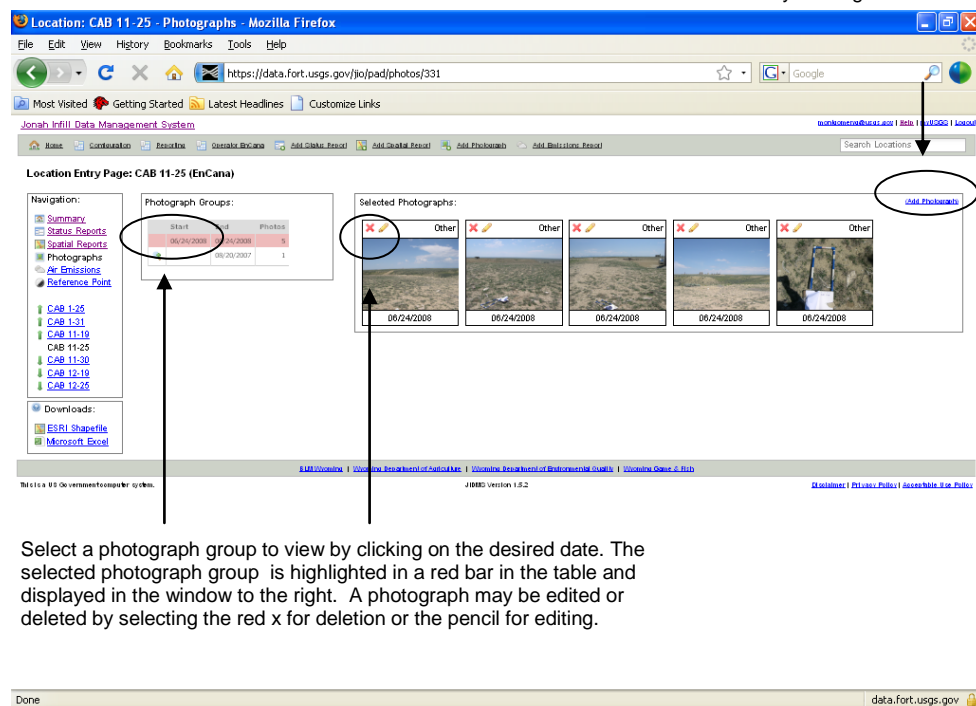
All of the photographs for a particular location can be accessed from the Navigation box on the **Location Entry Page**. To do this the user selects **Photographs** to open the **Photographs Groups** summary box and show the most recent Photographs.



The **Photograph Groups** summary box lists all of the photographs uploaded for this location. Photos are “grouped” by the collection date – so one collection date (which may range over a short period of time) will be grouped together and will all be shown as a group in the selected photographs box. The selected photo group is highlighted in a red bar in the table and displayed in the window to the right. A photograph may be edited or deleted by selecting the red x for deletion or the pencil for editing next to the report in the table.

Additional photos may be added by clicking here.

Select Summary to return to the original summary information.



Additional photographs may be added from this page by selecting **Add Photographs** in the upper right hand corner of the screen.

Select **Summary** in the Navigation box to return the **Location Entry Page** to its original view.

## **6. Add information on Weeds.**

The only option for adding information on Weeds is through the use of Alfresco Document Management which is discussed on page 29. Users can upload shapefiles of weed occurrences through Alfresco Document Management – however the shapefile must contain the location (i.e. CAB11-25) name associated with the file as well as the species name in the shapefile attributes.

## 7. View information on a Reference Point

A reference point identifies an undisturbed location near a disturbed location. It is an area where natural biological and physical processes are functioning normally. Photographs taken at the reference point are used to provide visual information on an undisturbed area and can be used as a guideline for reclamation efforts. Reference sites are captured by a point shapefile, and each of the defined sites includes one or more photographs.

To add a reference point, files related to the reference point must be zipped together and uploaded through Alfresco Document Management system.

**NOTE:** Please see section 3, **Batch Upload Files or Support Data** for more information regarding photo uploads and naming conventions.

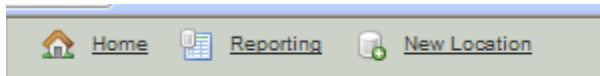
Select Reference Point from the Navigation section to access available information on the reference point for a particular location.

The screenshot displays the 'Jonah Infill Data Management System' interface. The 'Navigation' sidebar on the left has 'Reference Point' selected and circled. The main content area is titled 'Location Entry Page: CAB 12-25 (EnCana)'. It features a 'Reference Point Photographs' section with a grid of images and a 'Reference Point Location' map. The map shows a satellite view of a landscape with a blue polygon labeled 'CAB 12-25'. A red pin on the map is circled, and an arrow points to it with the text 'Location of the reference point.' The map also displays the coordinates 'Lat/Lon: 42.449930/-109.671191'.

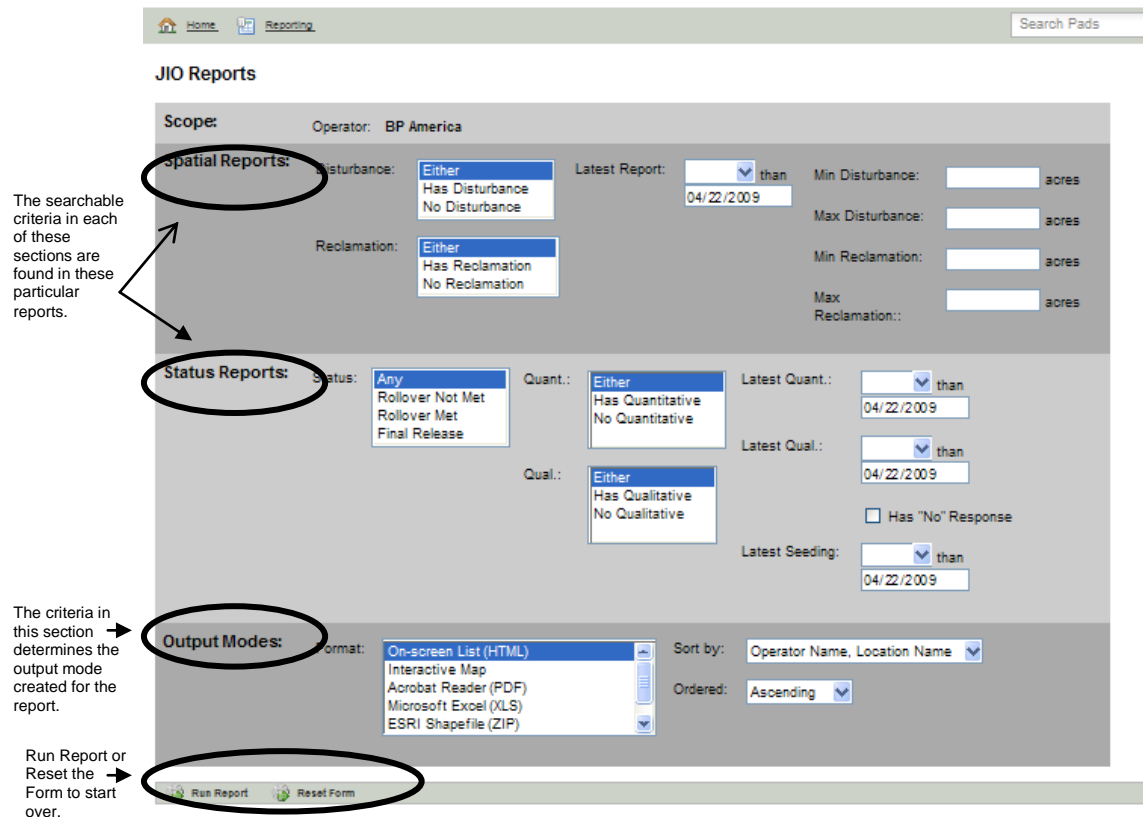
## Section 4: Obtain Reports, Download Files for Use Outside of the Application, or Upload Files for Use within the Application

### 1. JIO Reports

Select the **Reporting** link in the navigation bar to be taken to the **JIO Reports** page.



This page is designed to help the user create a custom report which includes specific information they are interested in. The user is given a variety of options to choose from which will allow them to include or exclude specific information. Information from either Spatial Reports or Status Reports is available.

A screenshot of the 'JIO Reports' page. The page has a header with 'Home', 'Reporting', and 'Search Pads' links. The main content area is titled 'JIO Reports' and includes a 'Scope:' section with 'Operator: BP America'. Below this are two main sections: 'Spatial Reports' and 'Status Reports'. The 'Spatial Reports' section has dropdowns for 'Disturbance' (Either, Has Disturbance, No Disturbance) and 'Reclamation' (Either, Has Reclamation, No Reclamation), along with date pickers for 'Latest Report' and 'Latest Seeding', and input fields for 'Min Disturbance', 'Max Disturbance', 'Min Reclamation', and 'Max Reclamation'. The 'Status Reports' section has a 'Status' dropdown (Any, Rollover Not Met, Rollover Met, Final Release), 'Quant.' and 'Qual.' dropdowns (Either, Has Quantitative/Qualitative, No Quantitative/Qualitative), and date pickers for 'Latest Quant.' and 'Latest Qual.'. There is also a checkbox for 'Has "No" Response'. Below these is the 'Output Modes' section with a 'Format' dropdown (On-screen List (HTML), Interactive Map, Acrobat Reader (PDF), Microsoft Excel (XLS), ESRI Shapefile (ZIP)) and 'Sort by' and 'Ordered' dropdowns. At the bottom are 'Run Report' and 'Reset Form' buttons. Annotations with arrows point to these sections: 'The searchable criteria in each of these sections are found in these particular reports.' points to 'Spatial Reports'; 'The criteria in this section determines the output mode created for the report.' points to 'Output Modes'; and 'Run Report or Reset the Form to start over.' points to the bottom buttons.

If on-screen list is chosen as the output mode – the user will see a report similar to the following. Once the report has run, it is possible to modify the report variables by clicking on the **Modify Search** link. It is also possible, from the report, to choose a different output mode such as Acrobat Reader (PDF).

Once a report has run – it is possible to modify the report variables by clicking Modify Search.

Once a report runs - a different output mode may be chosen from the reports page.

The screenshot shows the 'Jonah Infill Data Management System' interface. At the top, there is a navigation bar with links: Home, Reporting, **Modify Search** (circled), Map Report, Acrobat Reader (PDF), and Microsoft Excel (XLS). Below the navigation bar, there is a 'Search Pads' input field. The main content area is titled 'JIO Reports' and contains a table with the following data:

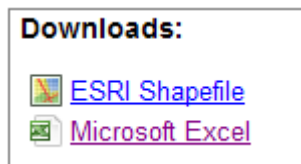
Operator	Name	Dist Acres	Recl Acres	Last Seeding	Seed Mix	Last Spatial	Last Quant.	Last Qual.	Recl. Stage	Status
BP America	<a href="#">ANTELOPE 15-4</a>	3.90	2.77			<a href="#">07/19/2008</a>				Rollover Not Met
BP America	<a href="#">ANTELOPE 3-14</a>	3.94	3.26			<a href="#">07/19/2008</a>				Rollover Not Met
BP America	<a href="#">ANTELOPE 3-14 ROAD</a>	3.56				<a href="#">07/19/2008</a>				Rollover Not Met
BP America	<a href="#">ANTELOPE 3-9</a>	4.41	3.22			<a href="#">07/19/2008</a>				Rollover Not Met

## 2. Download Files

A downloads option is available on the **Operator Summary Page** and the **Location Entry Page**.



Operator Summary Page



Location Entry Page

In the Downloads box on the **Operator Summary Page**, a user can download the spatial data into an ESRI Shapefile (shp) to be used in an ArcGIS application, OR download the **Location Summary Table** into a Microsoft Excel (xls) report or and Adobe Acrobat (pdf) file.

In the Downloads box on the **Location Entry Page**, a user can download the spatial data for the selected location into an ESRI Shapefile (shp) to be used in an ArcGis application OR download the summary information for the selected location into a Microsoft Excel (xls) report.

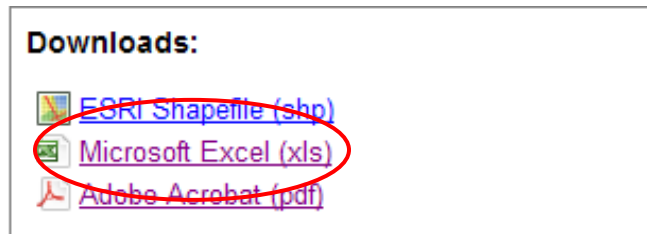


### 3. Qualitative and Quantitative Batch Upload Files

Please refer to Appendix A.4 for examples of completed data forms and correct data formats.

#### Steps: Batch Uploads

1. The data form used to perform a batch upload is found on the **Operator Summary Page**. Select the “Microsoft Excel (xls)” link under the **Downloads** heading.



2. Using the data forms:

- Select the desired report by choosing from the JIDMS Report, Quantitative or Qualitative tab located at the bottom of the spreadsheet.
- Delete the existing data and enter the new data.
- Delete the two tabs you're not currently using and save the spreadsheet.

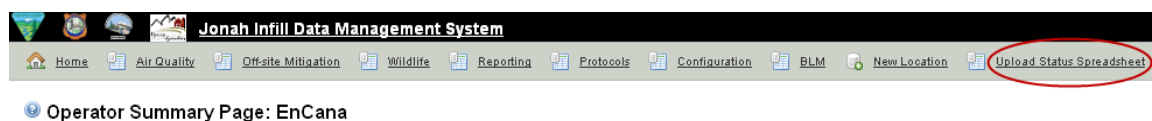
**Note:** There are 3 sheets in the Microsoft Excel download. The first sheet is labeled **All Data**. This sheet contains all of the data entered into JIDMS by a particular operator. This sheet should **NEVER** be used as a data form for batch uploads.

The second sheet is labeled **Quantitative**. This is the data form that is used for the quantitative data batch upload.

The third sheet is labeled **Qualitative**. This is the data form that is used for the qualitative data batch upload.

Qualitative and quantitative spreadsheets should be saved as individual files instead of one file with multiple worksheets.

3. Use the “Upload Status Spreadsheet” link found in the menu bar at the top of the **Operator Summary Page** to perform a batch upload.



4. Find the file to upload by pressing the “Browse” button. Once the file has been selected, use the qualitative and quantitative upload buttons to upload the file.

E.g. If a qualitative form is being uploaded then the “Upload Qualitative Worksheet” button would be selected to complete the upload.

**Note:** If any errors are encountered within the file, a list of the errors will appear on the screen and the file will NOT be uploaded. Data will only be uploaded once all errors are fixed.

The screenshot displays the 'Jonah Infill Data Management System' interface. At the top, there is a navigation bar with links for Home, Air Quality, Off-site Mitigation, Wildlife, Reporting, Protocols, Configuration, and BLM, along with a search bar for locations. Below this, the 'Upload Document' section is visible, featuring a file input field and a 'Browse...' button. At the bottom of the page, there are two buttons: 'Upload Qualitative WorkSheet' and 'Upload Quantitative WorkSheet', which are circled in red. The footer contains links to BLM Wyoming, Wyoming Department of Agriculture, Wyoming Department of Environmental Quality, Wyoming Game & Fish, and Feedback.

## **Batch Upload Error Messages and Guidelines**

This section lists the errors that can be encountered and offers suggestions to help the user identify possible problems with the form being uploaded when errors are present.

### **“Location name not found at row: <row #>”**

- Verify the location name in the specified row is spelled correctly.
- Verify the spaces in the name are correct.

E.g. if the correct name is CAB 34-27 then there MUST be a space between CAB and 34.

- Verify the location exists in the **Location Summary** table in the application.
- Edit the location name in the application by selecting the pencil icon located to the right, at the end of the row in the **Location Summary** table. Make sure there isn't a space at the end of the location name.

### **“Duplicate Collection Date at row: <row #>”**

A report with the same date already exists in the application for the specified location.

- Verify the **Collection Date** is in the following format: **dd/mm/yyyy**
- Check the specified location in the **Location Summary** table to verify that the date listed under the **Last Quant.** or **Last Qual.** (dependent on which file is being uploaded) column is not the same as what is entered in the file.

E.g. When uploading a qualitative data form a “**Duplicate Collection Date at row: 46**” is received. The location name in row 46 is CAB 35-1. Go to the application and look up CAB 35-1 in the **Location Summary** table. Once this location is found, check the **Last Qual.** column and see if the date listed is the same as the date listed in row 46. If it is, either the status report in the application should be deleted or the row in the data form should be deleted.

### **“The qualitative spreadsheet you are trying to upload has the wrong number of columns (it should have 17).”**

- Verify the data form being uploaded is the qualitative form
- Verify there are no extra columns added to the form – only 17 columns are allowed

### **“The quantitative spreadsheet you are trying to upload has the wrong number of columns (it should have 21).”**

- Verify the data form being uploaded is the quantitative form
- Verify there are no extra columns added to the form – only 21 columns are allowed

**“Missing <column name> at row: <row#>”**

At least one cell in the specified row is missing data (is empty).

- This error will appear for the qualitative data form when column D – P is missing data, excluding the comment fields.
- This error will appear for the quantitative data form column E – S is missing data.

**“Invalid <column name> data at row: <row #>”**

An invalid data error indicates which column in the specified row contains an incorrect data format or the data entered is out of range.

**E.g.** Error received “**Invalid Rec Stage data at row: 2**” indicates that the data contained in the rec stage column of row 2 is not numeric or that a number entered in the rec stage column is out of the accepted range which 1 - 4.

- Check the data dictionary in Appendix A.4 for the correct data standards for each column. Verify that the correct data format is used in the specified row and column.
- Check the data dictionary in Appendix A.4 for the acceptable range for each column. Verify that the data entered in the specified row and column is within the accepted range.

**“Collection method not valid at row: <row #>”**

While the collection method is optional, this error will appear if a collection method entered is spelled incorrectly.

- If **Line-Point Intercept** is entered, verify there's a hyphen (-), with no spaces, between line and point.
- Verify the collection method is spelled correctly.
- Verify the spaces in the name are correct.

## 4. Photograph, Spatial, and Support Data Batch Upload Files Utilizing Alfresco

### Alfresco Document Management System

Both spatial data and photos utilize Alfresco to upload batch files. Following are instructions detailing how to use Alfresco for this purpose.

An Alfresco Document Management option is available on the **Operator Summary Page**.

#### Operator Summary:

	Locns.	Dist. Acres	Recl. Acres
⚠	1778	4352.10	561.39
⚠	1	2.31	0.00
✓	0	0.00	0.00
Total	1779	4354.40	561.39

#### Documents:

 [Alfresco Document Management](#)

#### Downloads:











 [ESRI Shapefile \(.shp\)](#)  
 [Microsoft Excel \(.xls\)](#)  
 [Adobe Acrobat \(.pdf\)](#)

Click here to  
access Alfresco  
Document  
Management from  
the Operator  
Summary Page

### Steps: Using Alfresco Document Management System

1. After selecting the Alfresco Document Management link, select the directory associated with the batch files being uploaded:

**E.g.** If photos are being uploaded, select the “Photos” directory in Alfresco (See picture below)


Name	Description	Created	Modified	Actions
 Photos		24 April 2009 21:36	24 April 2009 21:36	
 QualitativeReports		24 April 2009 21:40	24 April 2009 21:40	
 QuantitativeReports		24 April 2009 21:35	24 April 2009 21:35	
 Shapefiles		24 April 2009 21:38	24 April 2009 21:38	
 SpeciesReports		24 April 2009 21:39	24 April 2009 21:39	


Page 1 of 1

2. On the following screen select “Add Content”

c Mgt): Content Home My Home Space My Dashboard

Content Home > Communities > JIO > Operators > BP > Photos

 Photos (0)

 Add Content Create More Actions Details View

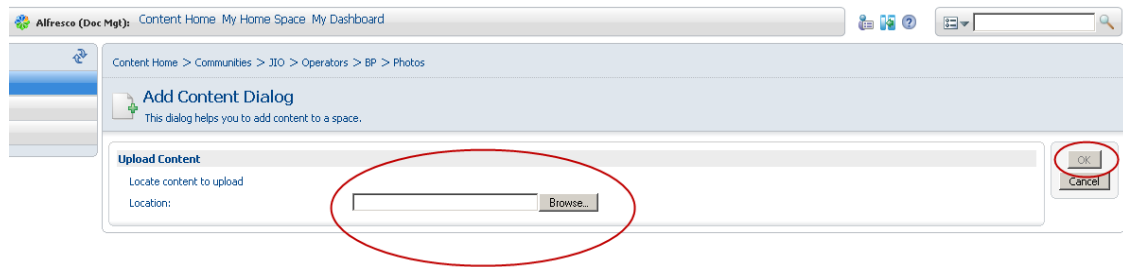
▼ Browse Spaces Items Per Page 20

No items to display. Click the 'Create Space' action to create a space.

Name	Description	Created	Modified	Actions
Page 1 of 1				

▼ Content Items Items Per Page 20

3. Use the “Browse” box to find the file to upload and select “OK”



Utilize Alfresco Document Management to upload the following batch files or support data.

- zipped shapefiles that reference multiple pads
- zipped photo directories
- zipped directory associated with reference point data
- zipped shapefiles that reference weed occurrences
- zipped shapefiles associated with mitigation/project data

#### **Spatial Data (well pads, pipelines, roads etc.)**

Upload zipped shapefiles into Alfresco Document Management. Ensure the location name in the shapefile matches the location name in the Status Report.

**E.g.** Select the “Shapefiles” directory in Alfresco

**NOTE:** Reclamation polygons **MUST** be uploaded with the corresponding disturbance polygon or the system will reject the spatial upload.

## **Photographs**

Upload a zipped photo directory or compressed batches of photographs into Alfresco Document Management. Ensure the photos are named as <feature name>\_<direction as N, S, E, W, Close-up>

### **Direction choices are:**

**N** = North

**S** = South

**E** = East

**W** = West

**O** = Other

**Close-up**

**Example:** North facing picture of CAB 1-25 would be named CAB\_1-25\_N

**NOTE:** Do **NOT** leave any spaces in the photograph name

## **Zippping Photos for Batch Upload**

There are two different methods that can be used depending on whether reference points and reclaimed photos are being included in a single zip file or they each have their own zip files.

**NOTE:** Do **NOT** leave any spaces in the zip file name.

### **Method 1: Zippping reference point photos and reclamation photos separately**

1. Reference point zip file naming convention for a **single reference point**

<feature\_name>\_reference.zip

**E.g.** If the feature name is CAB 2-25, name the zip file CAB\_2-25\_reference.zip

2. Reference point zip file for **multiple reference points**

<operator\_name>\_reference.zip

**E.g.** EnCana\_reference.zip

3. Reclamation zip file naming convention for a **single reclaimed location**

<feature\_name>.zip

**E.g.** If the feature name is CAB 2-25 then name the zip file CAB\_2-25.zip

4. Reclamation zip file for **multiple reclaimed locations**

<operator\_name>\_reclaimed.zip

**E.g.** EnCana\_reclaimed.zip

## **Method 2: Zipping reference point photos and reclamation photos in one zip file**

- Create a folder named “Reclaimed” and a folder named “ReferencePoints”
- Put all the photos of the reclamation in the “Reclaimed” folder
- Put all the photos of the reference points in the “ReferencePoints” folder
- Zip both the “Reclaimed” folder and the “ReferencePoints” folder into one zip file
- Name the zip file according to the operator’s name

**E.g.** If the photos are for BP America, name the zip file bp\_america.zip

- Upload the zip file into Alfresco under the photos directory

**\*\* Please see the **Photographs** section above to determine how individual photos should be named.**

## **Weeds Data**

Upload a shapefile of weed occurrences. The file must include location name and species name.

## **Mitigation/project data**

Upload a zipped directory with a README file that discusses the location, pad name, and other metadata on the files.



# Appendix

## A1. Reclamation Criteria

### **Reclamation Criteria** **Jonah Interagency Office Recommendations**

#### ***INTRODUCTION***

These reclamation criteria will be used to determine when roll-over and final reclamation have been met on federal lands within the Jonah Infill Drilling Project Area (JIDPA). These criteria were developed as required by the Jonah Infill Drilling Project Record of Decision (ROD) to assure habitat restoration and function in the shortest time possible. Best Management Practices will be implemented into this document as identified and procedures and/or criteria may be modified as necessary.

#### ***OBJECTIVES***

1. Rollover reclamation credit requires establishment of viable site-stabilizing plant growth (e.g., resistant to wind and water erosion) and a plant community that approximates surrounding or ecologically comparable vegetative composition to the maximum extent possible.
2. Final reclamation requires a range of species composition, diversity, cover and production equal to pre-disturbance levels.

#### ***RECLAMATION CRITERIA***

Each reclamation site will utilize a representative reference site for comparison to measure success of reclamation. A reference site must be undisturbed, similar in vegetative composition, soil structure, slope, and aspect. If possible, the reference site should be adjacent to the reclamation site and similar in size.

In recognition that vegetative composition is naturally sporadic, criteria may be met if data falls within  $\pm 5\%$  of the requirement.

See the JIO website for references on recommended plant lists, and Federal, State and County Noxious Weed Lists. References are also available to support scientific validation of the following criteria.

## **Roll-Over Criteria**

### **1. Erosion Control:**

The site must be in stable condition as indicated by the Erosion Control Classification System (BLM Tech Note 346). The percentage of bare ground must be equal to or less than the reference site.

### **2. Vegetative Criteria:**

- a. Native Forbs:** The average density or frequency of forbs must be a minimum of 75% of the reference site. Diversity of forbs on a reclaimed site must be equal to or greater than the reference site.
- b. Native Shrubs:** The average density or frequency of the shrub component must be at least 50% of the reference site. This includes both shrubs and half shrubs (e.g. winterfat, fringed sage, etc.), but rabbitbrush cannot account for more than 10% density or frequency of total shrub composition used to meet criteria. At least 15% density or frequency of the shrub component must be the dominant species from reference site. The diversity of shrubs must be equal to or greater than the reference site. Individual shrub plants younger than 3 years old will not count towards roll-over.
- c. Native Grasses:** Reclaimed sites must have a minimum of 3 native perennial grass species present, 2 of which must be bunch grass species.
- d. Non-Native Weeds:** Sites must be free from all species listed on the Wyoming or Federal noxious weed list. All state and federal laws regarding noxious weeds must be followed. Other highly competitive invasive species such as cheatgrass and other weedy brome grasses are also prohibited.
- e. Plant Vigor:** Plants must be resilient as evidenced by well-developed root systems, flowers, and seed heads. All sites must exhibit the sustainability of the above desired attributes after the removal of external influences. A minimum of 1 growing season without external influences (irrigation, mat pads, fences, etc.) may satisfy this requirement.

## **Final Criteria**

### **1. Ground Cover & Ecological Function:**

The site must be in stable condition as indicated by the Erosion Control Classification System (BLM Tech Note 346). To ensure soil stability and nutrient cycling, ground cover must be equal to or greater than the reference site and vegetative litter must be decomposing into the soil.

### **2. Vegetative Criteria:**

- a. **Native Forbs:** The average density or frequency and total diversity of forbs must be equal to or greater than the reference site.
- b. **Native Shrubs:** The average density or frequency of the shrub component must be at least 50% of the reference site. This includes both shrubs and half shrubs (e.g. winterfat, fringed sage, etc.), but rabbitbrush cannot account for more than 10% density or frequency of total shrub composition used to meet criteria. At least 25% density or frequency of the shrub component must be the dominant species from the reference site. Individual shrub plants younger than 3 years old will not count towards final criteria. The diversity of shrubs must be equal to or greater than the reference site.
- c. **Native Grasses:** Reclaimed sites must produce equal to or greater pounds of production per acre compared to the reference site. A minimum of 3 native perennial species must be included with at least 2 bunch grass species.
- d. **Non-Native Weeds:** Sites must be free from all species listed on the Wyoming or Federal noxious weed list. All state and federal laws regarding noxious weeds must be followed. Other highly competitive invasive species such as cheatgrass and other weedy brome grasses are also prohibited.
- e. **Plant Vigor:** Plants must be resilient as evidenced by well-developed root systems and flowers. Shrubs will be well established and in a “young” age class at a minimum (e.g. not comprised of seedlings that may not survive until the following year).

## Glossary

**Annual:** Completing the life cycle in one growing season or single year.

**Decomposition:** The breakdown of dead plant material.

**Density:** The number of individual plants per unit area.

**Diversity:** Composed of different plant species.

**Erosive Features:** Pedestals, flow patterns, rills, gullies, and soil movement.

**Erosion:** The wearing away of the land surface by rain or irrigation water, wind, ice or other natural or anthropogenic agents that abrade, detach and remove soil from one point on the earth's surface and deposit it elsewhere.

**Frequency:** The abundance and distribution of plants.

**Functioning Ecosystem:** The complex of a community of organisms and its environment functioning as an ecological unit.

**Ground Cover:** The soil cover of plant, litter, rocks, and gravel on a site.

**Invasive Species:** A species introduced by human action to a location, area, or region where it did not previously occur naturally (i.e., invasive), that becomes capable of establishing a breeding population in the new location without further intervention by humans, and spreads widely throughout the new location.

**Litter:** Dead plant material that may consist of leaves, twigs, and bark that has fallen to the ground.

**Nutrient Cycling:** In general, a plant using nutrients in the soil to grow, the plant dies over time and decomposes adding nutrients back into the soil for other plants to use repeating the cycle.

**Perennial:** Plants persisting for several years usually with new herbaceous growth from a perennating part.

**Production:** Plant biomass above ground present during a given year.

**Reference Area:** Areas where natural biological and physical processes are functioning normally.

**Resilience:** Plasticity or able to withstand change. The capacity to absorb shocks from environmental factors while maintaining function.

**Stable State:** Resistant to erosion.

**Sustainability:** Capable of being sustained. Two key related concepts are resilience and resistance. Resistance is the likelihood that a system will respond to a disturbance such as drought or pest invasion. A stable system resists large fluctuations in productivity, nutrient losses and other responses to stress. Systems with greater resilience return rapidly and reliably to the original conditions.

**Viability:** Persistence of a population or species into the future.

**Vigor:** Active healthy well-balanced growth.

## A2. Quantitative Data Dictionary

### Quantitative Data Dictionary

**Operator** - The name of the Operator

**Location** - The name of the pad, road, pipeline, equipment area

**Date** - Data collection data

**Undisturbed % Bare Ground** - Percent of bare ground on the reference site

**Disturbed % Bare Ground** - Percent of bare ground on the reclamation site. This must be less than or equal to the reference site.

**Undisturbed Avg. Density/Freq. Forbs** – Average number of rooted forbs and abundance and distribution of forbs on the reference site

**Disturbed Avg. Density/Freq. Forbs** – Average number of rooted forbs and abundance and distribution of forbs on the reclamation site. Must be at least 75% of the reference site

**Undisturbed No. of Forbs** – Number of forbs on the reference site

**Disturbed No. of Forbs** – Number of forbs on the reclamation site

**Undisturbed Avg. Density/Freq. Shrubs** – Average number of rooted shrubs and abundance and distribution of shrubs on the reference site

**Disturbed Avg. Density/Freq. Shrubs** – Average number of rooted shrubs and abundance and distribution of shrubs on the reclamation site. Must be at least 50% of the reference site.

**% Rabbitbrush** – Percent of shrub composition that is rabbitbrush. This cannot exceed more than 10% of shrub composition

**% Dominant Shrub** – Percent of shrub composition that is the dominant shrub (this is the dominant species on the reference site.) At least 15% (roll-over requirements) or 25% (finale release requirements) density/frequency of shrub component must be dominant species on reference site.

**Undisturbed No. of Shrubs** – Number of shrubs on the reference site

**Disturbed No. of Shrubs** – Number of shrubs on the reclamation site. Individual shrub plants younger than 3 years old do not count towards roll-over

**No. Grass Species** – Number of native perennial grasses present. At least 3 species must be present, 2 of which must be bunch grass species and the remaining one must be rhizomatous.

**No. Bunch Grasses** – Number of native perennial grasses that are bunch grass species. At least, 2 bunch grass species must be present

**Undisturbed Lbs. Grass Production** – Number of pounds of grass present above ground on the reference site. Not a roll-over requirement

**Disturbed Lbs. Grass Production** – Number of pounds of grass present above ground on the reclamation site. This is not a roll-over requirement BUT for final release this must be equal to or greater than the reference site.

### A3. Qualitative Data Dictionary

#### **Qualitative Data Dictionary**

**Operator** - The name of the Operator

**Location** -The name of the pad, road, pipeline, equipment area

**Date** - Data collection data

**Is seed germination apparent?** - Seeds have germinated, seedlings are emerging.

**Is the area free of undesirable materials (trash, construction materials, liquids, etc)?** -  
Examples: Trash, construction materials, etc.

**Is the soil stable with no indications of subsidence, slumping and/or significant erosion?** -  
Rills greater than 2 inches, accelerated erosion is obvious and soils are not being held by plants on site, sheet flow, head cutting in drainages, slopes occurring on or adjacent to reclaimed areas.

**Are other undesirable species absent?** -Cheatgrass, Japanese brome, etc.

**Is there evidence of good reproductive capability?** - Seed production is evident.

- Amount of tillers, rhizomes, flowers, and/or seed stalks are comparable to the reference site.
- To answer 'yes', must have all three plant types present: grass, forb, and shrub.

**Are noxious weeds absent?** - Perennial pepperweed, Canada thistle, black henbane, leafy spurge, yellow or Dalmatian toadflax, spotted knapweed, Russian knapweed, etc.

## A4. Example Data Forms and Data Formats

### Example Qualitative Form

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
						Is the area free of undesirable materials (trash, construction materials, liquids, etc)?		Is the soil stable with no indications of subsidence, slumping and/or significant erosion?		Are other undesirab le species absent?		Is there evidence of good reproductive capability?		Are noxious weeds absent?			
1	Operator	Location	Date	Is seed germination apparent?	Comments		Comments		Comments		Comments		Comments		Comments	RecStage	Stage Regressed?
2	EnCana	CAB 11-19	2/21/2011	Yes	Yes		Yes		Yes		No	No	Grass repro forbs only	Yes		2	
3	EnCana	CAB 11-25	2/21/2011	Yes	Yes		Yes		Yes		No	No	Grass repro forbs only	Yes		2	
4	EnCana	CAB 11-30	2/21/2011	Yes	Yes		Yes		Yes		No	No	Grass repro forbs only	Yes		2	
5	EnCana	CAB 12-19	2/21/2011	Yes	Yes		Yes		Yes		No	No	grass two species	Yes		2	
6	EnCana	CAB 12-25	2/21/2011	Yes	Yes		Yes		Yes		No	No	Grass repro forbs only	Yes		2	
7	EnCana	CAB 1-25	2/21/2011	Yes	Yes		Yes		Yes		No	No	Grass repro forbs only	Yes		2	
8	EnCana	CAB 1-31	2/21/2011	Yes	Yes		Yes		Yes		No	No	grass three species	Yes		2	
9	EnCana	cab 13-19	2/21/2011	Yes	Yes		Yes		Yes		No	No	grass three species	Yes		2	
10	EnCana	CAB 13-25	2/21/2011	Yes	Yes		Yes		Yes		No	No	Grass repro forbs only	Yes		2	
11	EnCana	CAB 13-30	2/21/2011	Yes	Yes		Yes		Yes		No	No	grass three species	Yes		2	
12	EnCana	CAB 14-25	2/21/2011	Yes	Yes		Yes		Yes		No	No	Grass repro forbs only	Yes		2	
13	EnCana	CAB 17-25	2/21/2011	Yes	Yes		Yes		Yes		No	No	Grass repro forbs only	Yes		3	
14	EnCana	CAB 19-25	2/21/2011	Yes	Yes		Yes		Yes		No	No	Grass repro forbs only	Yes		3	
15	EnCana	CAB 19-30	2/21/2011	Yes	Yes		Yes		Yes		No	No	grass three species	Yes		2	
16	EnCana	CAB 20-25	2/21/2011	Yes	Yes		Yes		Yes		No	No	Grass repro forbs only	Yes		4	
17	EnCana	CAB 2-25	2/21/2011	Yes	Yes		Yes		Yes		No	No	grass three species	Yes		1	
18	EnCana	CAB 29-25	2/21/2011	Yes	Yes		Yes		Yes		No	No	Grass repro forbs only	Yes		3	
19	EnCana	CAB 30-30	2/21/2011	Yes	Yes		Yes		Yes		No	No	Grass repro forbs only	Yes		2	
20	EnCana	CAB 32-25	2/21/2011	Yes	Yes		Yes		Yes		No	No	Grass repro forbs only	Yes		2	
21	EnCana	CAB 33-25	2/21/2011	Yes	Yes		Yes		Yes		No	No	Grass repro forbs only	Yes		2	
22	EnCana	CAB 33-30	2/21/2011	Yes	Yes		Yes		Yes		No	No	Grass repro forbs only	Yes		2	
23	EnCana	CAB 34-25	2/21/2011	Yes	Yes		Yes		Yes		No	No	Grass repro forbs only	Yes		2	
24	EnCana	CAB 35-25	2/21/2011	Yes	Yes		Yes		Yes		No	No	Grass repro forbs only	Yes	44	2	
25	EnCana	CAB 35-30	2/21/2011	Yes	Yes		Yes		Yes		No	No	grass three species	Yes		2	
26	EnCana	CAB 45-25	2/21/2011	Yes	Yes		Yes		Yes		No	No	Grass repro forbs only	Yes		2	
27	EnCana	CAB 45-30	2/21/2011	Yes	Yes		Yes		Yes		No	No	grass three species	Yes		2	
28	EnCana	CAB 47-25	2/21/2011	Yes	Yes		Yes		Yes		No	No	Grass repro forbs only	Yes		2	
29	EnCana	CAB 53-30	2/21/2011	Yes	Yes		Yes		Yes		No	No	Grass repro forbs only	Yes		2	



## **Qualitative Data Formats Accepted Per Column**

### **Required Fields**

**Operator:** Alpha characters  
**Location:** Alphanumeric  
**Date:** mm/dd/yyyy, will not accept any date prior to 01/01/1990

**"Is seed germination apparent?":** Alpha characters – only "Yes" or "No" is accepted  
**"Is the area free of undesirable...":** Alpha characters – only "Yes" or "No" is accepted  
**"Is the soil stable...":** Alpha characters – only "Yes" or "No" is accepted  
**"Are other undesirable species...":** Alpha characters – only "Yes" or "No" is accepted  
**"Is there evidence of good...":** Alpha characters – only "Yes" or "No" is accepted  
**"Are noxious weeds absent?":** Alpha characters – only "Yes" or "No" is accepted

### **Optional Fields**

**Columns E, G, I, K, M, and O:** Alphanumeric  
**"Stage Regressed?":** Alpha characters – only "Yes" or "No" is accepted  
**Rec Stage:** Numeric 1 – 4

## Example Quantitative Form

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
	Operator	Location	Date	Method	Soil Surface Factor	Undisturbed % Bare Ground	Disturbed % Bare Ground	Undisturbed Avg. Density/Fr eq. Forbs	Disturbed Avg. Density/Fr eq. Forbs	Undisturbed No. Forbs	Disturbed No. Forbs	Undisturbed Avg. Density/Fr eq. Shrubs	Disturbed Avg. Density/Fr eq. Shrubs	% Rabbit Brush	% Dominant Shrub	Undisturbed No. Shrubs	Disturbed No. Shrubs	No. Grass Species	No. Bunch Grasses	Undisturbed Lbs. Grass Production	Disturbed Lbs. Grass Production
2	BP America	Plot 1	7/22/2010	Frequency	7	36	65	60	0	6	4	80	0	0	0	3	1	3	3		
3	BP America	Plot 2	7/22/2010	Frequency	7	56	67	85	30	6	6	70	0	0	0	4	2	5	3		
4	BP America	Plot 3	7/22/2010	Frequency	7	52	43	45	5	4	5	95	5	0	5	2	4	6	3		
5	BP America	Plot 4	7/22/2010	Frequency	7	47	34	50	5	5	3	90	25	0	25	2	3	4	2		
6	BP America	Plot 5	7/22/2010	Frequency	7	55	40	50	25	5	2	90	40	0	40	3	3	5	3		
7	BP America	Plot 6	7/22/2010	Frequency	7	56	39	55	10	6	3	85	10	0	10	3	2	3	2		
8	BP America	Plot 7	7/22/2010	Frequency	7	55	47	50	30	6	4	90	10	0	10	3	3	5	3		
9	BP America	Plot 8	7/22/2010	Frequency	7	54	49	75	25	7	4	90	15	0	15	3	3	4	2		
10	BP America	Plot 10	7/22/2010	Frequency	7	50	50	70	5	7	4	90	5	0	5	3	1	4	3		
11	BP America	Plot 11	7/22/2010	Frequency	7	56	42	65	5	5	3	85	5	0	5	3	2	4	3		
12	BP America	Plot 12	7/22/2010	Frequency	7	55	42	80	20	5	3	80	20	0	20	3	2	5	3		
13	BP America	Plot 13	7/22/2010	Frequency	7	55	42	75	20	4	4	70	50	0	50	5	4	6	4		
14	BP America	Plot 14	7/22/2010	Frequency	7	46	31	80	20	4	3	80	5	0	5	3	2	6	4		
15	BP America	Plot 15	7/22/2010	Frequency	7	30	46	75	15	6	2	95	10	0	10	2	2	4	3		
16	BP America	Plot 16	7/22/2010	Frequency	7	37	31	75	20	7	6	75	25	0	25	3	2	5	4		
17	BP America	Plot 17	7/22/2010	Frequency	7	41	38	70	10	7	6	80	65	0	65	2	3	6	4		
18	BP America	Plot 18	7/22/2010	Frequency	7	46	64	85	5	10	4	55	5	0	5	4	5	5	3		
19	BP America	Plot 19	7/22/2010	Frequency	7	47	50	85	15	10	5	60	60	0	60	4	4	5	3		
20	BP America	Plot 20	7/22/2010	Frequency	7	50	45	60	65	11	5	70	35	0	35	4	3	6	5		
21	BP America	Plot 21	7/22/2010	Frequency	7	48	43	65	10	10	3	70	80	0	80	4	3	5	3		
22	BP America	Plot 22	7/22/2010	Frequency	7	43	46	60	10	9	6	90	85	0	85	3	3	7	4		
23	BP America	Plot 23	7/22/2010	Frequency	7	37	41	60	20	9	6	100	90	0	90	3	5	5	3		
24	BP America	Plot 24	7/22/2010	Frequency	7	43	42	65	50	10	4	95	100	0	100	4	3	6	4		
25	BP America	Plot 25	7/22/2010	Frequency	7	36	32	90	20	9	4	95	50	0	50	3	2	4	3		
26	BP America	Plot 26	7/22/2010	Frequency	7	33	48	100	25	13	8	100	55	0	55	2	3	5	3		
27	BP America	Plot 27	7/22/2010	Frequency	7	44	37	75	5	12	4	95	50	0	50	2	3	6	3		
28	BP America	Plot 28	7/22/2010	Frequency	7	43	37	70	0	10	5	95	55	0	55	3	4	5	3		
29	BP America	Plot 29	7/22/2010	Frequency	7	43	41	70	15	10	5	75	5	0	5	3	5	5	3		
30	BP America	Plot 30	7/22/2010	Frequency	7	42	38	65	30	8	5	65	10	0	10	2	4	4	2		

## Qualitative Data Formats Accepted Per Column

### Required Fields

**Operator:** Alpha characters  
**Location:** Alphanumeric  
**Date:** mm/dd/yyyy, will not accept any date prior to 01/01/1990

**Soil Surface Factor:** Numeric range 0 – 100  
**Undisturbed % Bare Ground:** Numeric range 0 – 100  
**Disturbed % Bare Ground:** Numeric range 0 – 100

**Undisturbed Avg. Density/Freq. Forbs:** Numeric  
**Disturbed Avg. Density/Freq. Forbs:** Numeric  
**Undisturbed No. Forbs:** Numeric  
**Disturbed No. Forbs:** Numeric  
**Undisturbed Avg. Density/Freq. Shrubs:** Numeric  
**Disturbed Avg. Density/Freq. Shrubs:** Numeric

**% Rabbit Brush:** Numeric range 0 – 100  
**% Dominant Shrub:** Numeric range 0 – 100

**Undisturbed No. Shrubs:** Numeric  
**Disturbed No. Shrubs:** Numeric  
**No. Grass Species:** Numeric  
**No. Bunch Grass:** Numeric

### Optional Fields

**Method:** Alpha characters  
Acceptable options: Basal Cover  
Daubenmire Frame  
Frequency  
Line-Point Intercept (the **hyphen**) must be present  
Percent Cover  
Visual

**Undisturbed Lbs. Grass Production:** Numeric  
**Disturbed Lbs. Grass Production:** Numeric